

Appl. No. 10/559,737  
Amtd. Dated February 16, 2010  
Reply to Office Action of November 18, 2009

Attorney Docket No. 89227.0011  
Customer No.: 26021

REMARKS/ARGUMENTS:

Claim 1 is amended. Support for the amendment to claim 1 can be found at p. 29, line 17-p. 30, line 9 of Applicant's specification. Claims 1-28 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to a phosphazene compound, a photosensitive resin composition, and usage thereof. (Applicant's specification, at p. 1, lines 1-5).

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 1, 2, and 6-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Masatoshi et al. (JP 2001-335703) taken with Nakacho et al. (U.S. Patent No. 6,596,893) in view of Hook et al. (U.S. Patent No. 3,711,389) and Tamura et al. (U.S. Patent No. 7,195,857). Applicant respectfully traverses this rejection. Claim 1, as amended, is as follows:

A phosphazene compound, obtained by reacting a phenoxyphosphazene compound (A-1) having a phenolic hydroxyl group and/or a cross-linked phenoxyphosphazene compound (A-2) obtained by cross-linking the phenoxyphosphazene compound (A-1) with an epoxy compound (B) having an unsaturated double bond and/or an isocyanate compound (C), wherein

the phosphazene compound has an unsaturated double bond and a phenolic hydroxyl group in its molecule.

Applicant respectfully submits that the cited references cannot render claim 1 obvious, because the cited references fail to teach or suggest that "the phosphazene compound has an unsaturated double bond and a phenolic hydroxyl group in its molecule."

It is an aspect of the present invention that the phenolic hydroxyl group is included in the molecule, so that the phosphazene compound allows formation of a mesh structure by reacting particularly with an epoxy resin component in curing the photosensitive resin composition. Thus, efficient curing is possible, thereby obtaining a cured product having excellent heat resistance. Further, it is also possible to improve alkaline solubility compared with the conventional phosphazene compound. (Applicant's specification, at p. 30, lines 1-9).

The phosphazene compounds disclosed in Masatoshi have no phenolic hydroxyl groups in their molecules since "all the hydroxyl groups are substituted." Specifically, the Syntheses, Examples 8-11 of Masatoshi reveal that there are no remaining hydroxyl groups.

In contrast, the phosphazene compound of the present invention is characterized by having "a phenolic hydroxyl group" in its molecule. Such a characteristic produces advantageous effects. For example, (i) the phenolic hydroxyl group remarkably improves compatibility with respect to the soluble polyimide resin, (ii) it is possible to suppress precipitation of the flame retardant on the surface, and (iii) the phosphazene compound allows formation of a mesh structure by reacting with an epoxy resin component in curing the photosensitive resin composition (see e.g., Applicant's specification, at p. 29, line 17-p. 30, line 9).

None of the cited references, either alone or in combination, teach or suggest having a "phenolic hydroxyl group" in the molecule. Moreover, none of the cited references disclose anything related to the advantageous effects, discussed above, that result from having "a phenolic hydroxyl group" in the molecule.

In light of the foregoing, Applicant respectfully submits that the cited references cannot render claim 1 obvious, because the cited references fail to teach or suggest each and every claim limitation. Claims 2 and 6-12 depend from claim 1

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and cannot be rendered obvious for at least the same reasons as claim 1. Withdrawal of this rejection is thus respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310)785-4600 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,  
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